

Remarks/Arguments

At the outset applicants wish to thank the Examiner for allowance of claim 23.

Claim 22 has been amended to recite a method of making a reactive multilayer foil (RMF) that includes a plurality of openings. Thus it can be seen that each of the claims is directed to a method of making an apertured RMF.

Claim 24 has been amended to call for the separation of the reactive multilayer foil and the substrate. Support for this amendment may be found in the specification at least at page 21, lines 1-9.

In addition, minor amendments to form are made in Claims 22 and 25. Claims 44 and 45, added by this Amendment, are directed to subject matter set forth in original Claim 25. As such, Claims 44 and 45 do not constitute new matter and do not present new issues requiring further consideration or search.

Applicants respectfully submit that Claims 22, 24, 25, 44, and 45 are patentably distinct from all cited art, for at least the reasons set forth in detail below.

Claims 22 and 24, 25 have been rejected under 35 USC Section 103 as unpatentable over U.S. Patent No. 5,497,938 to McMahon in view of U.S. Patent No. 5,266,132 to Danen and U.S. Patent No. 3,729,046 to Kennedy. It is the Examiner's position that McMahon teaches a tape substrate with openings containing inserted solder balls and that it would have been obvious to one of ordinary skill in the art to make the reactive foil of Danen by the method of Kennedy and substitute the resulting reactive foil for the apertured tape of McMahon. These rejections are respectfully traversed.

At the outset it should be noted that none of the three references being combined teaches or suggests any method for making an apertured reactive foil. The primary reference to McMahon uses

an elastomeric tape to transfer solder balls to chip assemblies. While some embodiments of the tape are apertured to hold solder balls, the tape is non-reactive. McMahon is devoid of any teaching or suggestion that the tape should be reactive or how to make an apertured reactive foil.

The Examiner is correct that the secondary reference to Danen describes a type of reactive foil. But Darien fails to teach or suggest any method for making a reactive foil that is apertured.

The third reference to Kennedy relates to a foil. The foil, however, is not reactive and there is no suggestion in Kennedy that the foil should be apertured. Moreover, the fabrication methods taught by Kennedy are directed away from the fabrication of an apertured reactive foil. Kennedy specifically teaches away from processes that produce pinholes, expressly teaches away from the use of rough substrates (that might produce apertures), and calls for high substrate temperatures that could cause reactive foils to react. See, for example, Col. 1, lines 60-66; Col. 3, lines 46-48; and Col. 3, lines 7-8. The proposed combination thus proposes using a method unsuitable for making reactive foils to make a reactive foil to substitute for an elastomeric tape used for transport.

If a cited reference is not analogous art, it has no bearing on the obviousness of a patent claim. Jurgens v. McKasy, 927 F.2d 1552, 18 USPQ 2d 1031 (Fed. Cir. 1991), cert. denied 502 US902 (1991). To be analogous art, a reference must be pertinent to the problem with which the inventor is concerned. In re Gorman, 933 F.2d 982, 18 USPQ 2d 1885 (Fed. Cir. 1991):

"Determination of whether a new combination of known elements would have been obvious... depends on various factors, including whether the elements exist in 'analogous art; that is, art that is reasonably pertinent to the problem with which the inventor is concerned."

Combination of elements from non-analogous sources indicates hindsight and is insufficient to present a prima facie case of obviousness. In re Clay, 966 F.2d 656, 23 USPQ 1058 (Fed. Cir. 1992). Common sense is a touchstone in determining whether prior art is analogous or

not. In re Clay, id ("[I]t is necessary to consider the reality of circumstances...- in other words, common sense - in deciding which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.")

It is submitted that upon reconsideration the Examiner will recognize that none of McMahon, Danen or Kennedy are directed to solving the problem of making apertured reactive multilayer foils. Indeed Kennedy is trying to make a highly ductile, non-reactive foil free of pinholes. Danen is simply trying to make a reactive foil, and McMahon is trying to transport solder balls. Kennedy and McMahon are thus in arts non-analogous to Danen and to the present invention, and the 103 rejection is an improper combination of non-analogous references.

Even if McMahon and Kennedy were analogous to Danen, which applicants deny, claims 22 and 24, 25 could not properly be rejected under 35 USC Section 103 as obvious combinations of these references.

To establish a *prima facie* case of obviousness based on a combination of references, three requirements must be satisfied: (1) the prior art relied upon must contain some suggestion or motivation for combining the references to produce proposed modification; (2) the proposed modification must have had a reasonable expectation of success; and (3) the references must teach or suggest all claim limitations. See In re Chu, 66 F. 3d 292, 36 USPQ 2d 1089, 1094 (Fed. Cir. 1995); In re Oetiker, 977 F.2d 1443, 24 USPQ 2d 1443, 1444-6 (Fed. Cir. 1992); and MPEP § 2143. The burden of satisfying these requirements rests with the Examiner. See MPEP § 2142. The combination of McMahon and Danen and Kennedy does not satisfy these requirements.

In order for a combination of references to make obvious a claimed invention there must be some teaching or motivation in the references which suggests the proposed modification. The Federal Circuit has repeatedly emphasized that, in making an obviousness rejection, a modification

of the prior art is appropriate only where the modification is suggested in the prior art. In re Fritch, 972 F.2d 1260, 1266; 23 USPQ 1780 (Fed. Cir. 1992), provides in relevant part:

Under Section 103, teachings of reference can be combined only if there is some suggestion or incentive to do so. Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious 'modification' of prior art. The mere fact that the prior art may be modified as suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. (Emphasis added).

The motive for the modification may not be supplied by the hindsight afforded by the inventor's own application. In re Chu, 66 F.3d 292, 36 USPQ 2d 1089, 1094 (Fed. Cir. 1995); In re Oetiker, 977 F.2d 1443, 24 USPQ 2d 1443, 1444-6 (Fed. Cir. 1992); and MPEP § 2143.

Here the claimed inventions are methods of making a reactive foil having apertures. Not one of the cited references teaches, suggests or motivates such a method. McMahon has nothing to do with foil, reactive or otherwise, Danen has nothing to do with making apertures, and Kennedy teaches that apertures should be avoided.

In view of the foregoing, it is respectfully submitted that all claims now patentably distinguish from all cited art. Accordingly this application now fully complies with the provisions of 35 USC Section 103 and is now in condition for allowance. Reconsideration and favorable action in this regard is therefore earnestly solicited.

Respectfully submitted,



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